Amendments to the Claims

1. (Currently Amended) A method for presenting three-dimensional computer graphics images of a scene using multiple graphics processing units, comprising the steps of:

(1) allocating, to each GPU, three-dimensional computer graphics data such that said allocated three-dimensional computer graphics data correspond to a portion of the scene that lies within ~~the~~ a rectangular subvolume to which that GPU has been assigned;

(2) rendering, by each of the GPUs, said allocated three-dimensional computer graphics data;

(3) combining said rendered three-dimensional computer graphics data, thereby producing a three-dimensional computer graphics image; and

(4) presenting, for viewing, said combined three-dimensional computer graphics image;

wherein said allocated computer graphics data that correspond to the portion of the scene includes at least one of first data for a first graphics primitive having first vertices that lie within the rectangular volume to which that GPU has been assigned, and second data for a second graphics primitive having a vertex that lies outside of the rectangular subvolume to which that GPU has been assigned.

2. (Original) The method of claim 1,wherein said allocating further comprises loading, into a memory cell accessible by that GPU, the three-dimensional computer

graphics data corresponding to a portion of the scene that lies within the rectangular subvolume to which that GPU has been assigned.

3. (Original) The method of claim 1, further comprising, before step (2), the steps of:

(5) determining a viewing position; and

(6) communicating said determined viewing position to each GPU.

4. (Original) The method of claim 3, wherein said combining further comprises the step of:

(7) ordering said rendered three-dimensional computer graphics data based on locations between said determined viewing position and each rectangular subvolume.

5. (Original) The method of claim 1, wherein said combining further comprises the step of:

(8) blending said rendered three-dimensional computer graphics data.

6. (Original) The method of claim 1, wherein said combining is performed by at least one image combiner.

7. (Original) The method of claim 6, wherein each of the at least one image combiner has an associated frame buffer for storing said combined three-dimensional computer graphics image.

8. (Original) The method of claim 6, wherein an output of the at least one image combiner is an input for another image combiner.

9. (Currently Amended) A system for presenting three-dimensional computer graphics images using multiple graphics processing units, comprising:

memory for storing three-dimensional computer graphics data;

at least one GPU for rendering a portion of the three-dimensional computer graphics data~~, wherein each of~~ that corresponds to a rectangular subvolume to which said at least one GPU is assigned ~~to a rectangular subvolume~~;

a communications means for communicating a viewing position to each of said at least one GPU; and

at least one image combiner for combining the three-dimensional computer graphics data rendered by said at least one GPU, to produce a three-dimensional computer graphics image;

wherein said portion of the three-dimensional computer graphics data includes at least one of first data for a first graphics primitive having first vertices that lie within the rectangular volume to which said at least one GPU is assigned and second data for a second graphics primitive having a vertex that lies outside of the rectangular subvolume to which said at least one GPU is assigned.

10. (Original) The system of claim 9, wherein said memory is memory cells such that each said memory cell is accessible by only one of said at least one GPU.

11. (Original) The system of claim 9, wherein at least one of said at least one image combiner is configured to receive the output of at least one other of said at least one image combiner.